

IN THE CLAIMS:

. Please cancel Claims 38-42 and 48 without prejudice to or disclaimer of the subject matter presented therein.

Please amend Claims 1, 3, 13, 16, 18, 24, 29, 31, 32, 35-37, 43, 49, 50, 55, and 61-66 as follows.

1. (Currently Amended) A data processing system including an image processing apparatus for processing an image and a maintenance apparatus for setting a processing function of said image processing apparatus, said maintenance apparatus connected with said image processing apparatus through a network, wherein

said maintenance apparatus receives an addition level of anti-forgery information as a toner image, electrophotographically formed on a print medium by said image processing apparatus, and transmits an appropriate anti-forgery information addition level to the image processing apparatus based on the received addition level, and

said image processing apparatus adds anti-forgery information as an electrophotographical toner image, having the transmitted appropriate addition level, to an image.

2. (Original) The data processing system according to claim 1, wherein said maintenance apparatus determines the appropriate anti-forgery information addition level based on a test pattern transmitted by said image processing apparatus.

3. (Currently Amended) A data processing system including an image processing apparatus for processing an image and a maintenance apparatus for setting a processing function of said image processing apparatus, said maintenance apparatus connected with said image processing apparatus through a network, wherein

said image processing apparatus comprises:

image forming means for forming an image to which anti-forgery information as an electrophotographic toner image is added at a predetermined addition level;

reading means for reading the image formed by said image forming means; and

transmitting means for transmitting image data, read by said reading means, to said maintenance apparatus through the network, and

said maintenance apparatus comprises:

reception means for receiving the image data transmitted by said transmission means of said image processing apparatus; and

setting means for determining an addition level appropriate for said image processing apparatus based on the image data received by said reception means, and setting the ~~determined addition level to said image processing apparatus~~ to use the determined addition level,

wherein said image forming means adds anti-forgery information as an electrophotographic toner image, having the addition level set by said setting means, to the image.

4. (Original) The data processing system according to claim 3, said image processing apparatus further comprising addition level storage means for storing the addition level, wherein said image forming means adds anti-forgery information to the image at the addition level, stored in said addition level storage means, and forms an image.

5. (Original) The data processing system according to claim 4, said image processing apparatus further comprising test pattern storage means for storing a test pattern, wherein said image forming means adds anti-forgery information to the test pattern, stored in said test pattern storage means, and forms an image.

6. (Original) The data processing system according to claim 5, said image processing apparatus further comprising anti-forgery information storage means for storing anti-forgery information, wherein said image forming means adds anti-forgery information, stored in said anti-forgery information storage means, to the test pattern and forms an image.

7. (Original) The data processing system according to claim 5, said image processing apparatus further comprising:

anti-forgery information storage means for storing first anti-forgery information to be added to a test pattern and second anti-forgery information to be added to an ordinary image; and

selection means for selecting one anti-forgery information from a plurality of anti-forgery information stored in said anti-forgery information storage means,

wherein said image forming means adds the anti-forgery information, selected by said selection means, to an image for image formation.

8. (Original) The data processing system according to claim 3, said setting means of said maintenance apparatus further comprising:

determination means for determining an addition level appropriate for said image processing apparatus based on the image data received by said reception means; and

transmission means for transmitting the addition level, determined by said determination means, to said image processing apparatus.

9. (Original) The processing system according to claim 8, wherein said determination means obtains as the addition level appropriate for said image processing apparatus, a level at which anti-forgery information is readable based on the image data received by said reception means.

10. (Original) The data processing system according to claim 9, wherein said determination means of said maintenance apparatus comprises storage means for storing reference data used for determining the addition level, and determines the addition level based on the reference data and the image data received by said reception means.

11. (Original) The data processing system according to claim 10, wherein said determination means performs calculation on the image data received by said reception means and the reference data to determine an addition level which satisfies a predetermined condition.

12. (Original) The data processing system according to claim 5, wherein the anti-forgery information added to the test pattern differs from the anti-forgery information added to an ordinary image.

13. (Currently Amended) A data processing system including an image processing apparatus for processing an image and a maintenance apparatus for setting a processing function of said image processing apparatus, said maintenance apparatus connected with said image processing apparatus through a network, wherein

said image processing apparatus comprises:

image forming means for forming an image, inclusive of anti-forgery information as an electrophotographic toner image in a plurality of addition levels;

reading means for reading the image formed by said image forming means; and

transmission means for transmitting the image, read by said reading means, to said maintenance apparatus through the network, and

said maintenance apparatus comprises:

reception means for receiving the image data transmitted by said transmission means of said image processing apparatus; and

setting means for selecting an addition level appropriate for said image processing apparatus from the plurality of addition levels based on the image data received by said reception means, and setting the ~~selected addition level to said image processing apparatus~~ to use the selected addition level,

wherein said image forming means adds anti-forgery information as an electrophotographic toner image, having the addition level set by said setting means, to an image.

14. (Original) The data processing system according to claim 13, comprising, in place of said image forming means, image forming means for forming an image inclusive of plural types of anti-forgery information.

15. (Original) The data processing system according to claim 13, comprising, in place of said image forming means, image forming means for forming an image inclusive of  $n \times m$  ( $n$  and  $m$  are natural numbers) anti-forgery information, consisting of  $n$  number of anti-forgery information in  $m$  number of addition levels.

16. (Currently Amended) An image processing apparatus that electrophotographically forms a toner image, maintained by an externally connected maintenance apparatus, comprising:

report means for reporting information related to deterioration of said image processing apparatus; and

addition means for adding anti-forgery information as an electro photographic toner image, having an addition level which is determined based on instruction data transmitted by said maintenance apparatus in response to the report, to an image.

17. (Original) The image processing apparatus according to claim 16, wherein said report means transmits, as the information related to deterioration, a test pattern inclusive of anti-forgery information to said maintenance apparatus.

18. (Currently Amended) An image processing apparatus connected to an external maintenance apparatus, comprising:

addition means for adding anti-forgery information as an electrophotographic toner image, having a predetermined addition level, to an image;

output means for outputting the image to which the anti-forgery information is added;

reading means for reading the image, outputted by said output means;

transfer means for transferring image data, read by said reading means, to said maintenance apparatus; and

reception means for receiving response data, transmitted by said maintenance apparatus in response to the transfer of the image by said transfer means,

wherein said addition means adds the anti-forgery information as an electrophotographic toner image to a next input image at an addition level designated by the response data.

19. (Original) The image processing apparatus according to claim 18, further comprising addition level storage means for storing the addition level, wherein said addition means adds anti-forgery information having the addition level stored in said addition level storage means.

20. (Original) The image processing apparatus according to claim 19, further comprising test pattern storage means for storing a test pattern, wherein said addition means adds anti-forgery information to the test pattern, stored in said test pattern storage means.

21. (Original) The image processing apparatus according to claim 20, further comprising anti-forgery information storage means for storing anti-forgery information, wherein said addition means adds anti-forgery information, stored in said anti-forgery information storage means, to the test pattern.

22. (Original) The image processing apparatus according to claim 20, further comprising:

anti-forgery information storage means for storing first anti-forgery information to be added to a test pattern and second anti-forgery information to be added to an ordinary image; and

selection means for selecting one anti-forgery information from a plurality of anti-forgery information stored in said anti-forgery information storage means,



wherein said addition means adds the anti-forgery information, selected by said selection means, to an image.

23. (Original) The image processing apparatus according to claim 20, wherein the anti-forgery information added to the test pattern differs from the anti-forgery information added to an ordinary image.

24. (Currently Amended) A maintenance apparatus for maintaining an image processing apparatus which electrophotographically forms an image inclusive of anti-forgery information, comprising:

determination means for determining an anti-forgery information addition level in accordance with deterioration of the image processing apparatus; and

setting means for setting the addition level, determined by said determination means, to the image processing apparatus.

25. (Original) The maintenance apparatus according to claim 24, wherein said determination means obtains an addition level, at which anti-forgery information is readable, based on the image transmitted by the image processing apparatus, and determines the addition level appropriate for the image processing apparatus.

26. (Original) The maintenance apparatus according to claim 24, wherein said determination means obtains an addition level, at which anti-forgery information is

readable, based on the image transmitted by the image processing apparatus, and determines the addition level appropriate for the image processing apparatus.

27. (Original) The maintenance apparatus according to claim 25, wherein said determination means comprises storage means for storing reference data used for determining the addition level, and determines the addition level appropriate for the image processing apparatus based on the reference data and the image transmitted by the image processing apparatus.

28. (Original) The maintenance apparatus according to claim 27, wherein said determination means performs calculation on the image transmitted by the image processing apparatus and the reference data, and determines as the addition level appropriate for the image processing apparatus an addition level which satisfies a predetermined condition.

29. (Currently Amended) An image processing apparatus setting method of setting an anti-forgery information addition level for an image processing apparatus electrophotographically forming an image inclusive of anti-forgery information, comprising the steps of:

checking deterioration of the image processing apparatus;

determining an anti-forgery information addition level appropriate for the image processing apparatus based on a checking result obtained at said checking step; and

setting the ~~addition level, determined at said determination step, to the image~~  
processing apparatus to use the addition level determined at said determination step.

30. (Original) The image processing apparatus setting method according to claim 29, further comprising the step of receiving a test pattern transmitted by the image processing apparatus,

wherein at said checking step, a deterioration level of the image processing apparatus is checked based on the test pattern.

31. (Currently Amended) An image processing apparatus setting method employed by a data processing system including an image processing apparatus for electrophotographically forming processing an image and a maintenance apparatus for setting a processing function of the image processing apparatus, the maintenance apparatus connected with the image processing apparatus through a network, said method comprising the steps of:

adding first anti-forgery information as an electrophotographic toner image to a test pattern at a first addition level;

reading the test pattern, to which the anti-forgery information is added;

transmitting the read test pattern;

receiving the test pattern inclusive of the anti-forgery information;

determining a second addition level appropriate for the image processing apparatus based on the received test pattern; and

setting the ~~second addition level to the~~ image processing apparatus to use the second addition level.

32. (Currently Amended) An anti-forgery information addition method employed by an image processing apparatus which is maintained by an externally connected maintenance apparatus and electrophotographically forms a toner image, said method comprising the steps of:

reporting information related to deterioration of the image processing apparatus to the maintenance apparatus;

receiving instruction data transmitted by the maintenance apparatus in response to the report; and

adding anti-forgery information as an electrophotographic toner image to an image at a predetermined addition level based on the instruction data.

33. (Original) The anti-forgery information addition method according to claim 32, wherein at said reporting step, a test pattern inclusive of anti-forgery information is transmitted as the information related to the image processing capability or the information related to the deterioration level of the image processing function.

34. (Original) The anti-forgery information addition method according to claim 33, wherein the anti-forgery information used at said adding step differs from the anti-forgery information added to the test pattern.

35. (Currently Amended) A computer-readable medium having a computer program saved thereupon, said computer program comprising the steps of:

- checking deterioration of an image processing apparatus, which electrophotographically forms an a toner image inclusive of anti-forgery information;
- determination an anti-forgery information addition level appropriate for the image processing apparatus based on a checking result obtained at said checking step; and
- transmitting the addition level, determined at said determination step, to the image processing apparatus.

36. (Currently Amended) A computer-readable medium having a computer program saved thereupon, said computer program comprising the steps of:

- received a test pattern from an image processing apparatus, the test pattern electrophotographically formed by adding first anti-forgery information having a first addition level;
- determining a second addition level appropriate for the image processing apparatus based on the received test pattern; and
- setting the ~~second addition level to the~~ image processing apparatus to use the second addition level.

37. (Currently Amended) A computer-readable medium having a computer program saved thereupon, said computer program comprising the steps of:

- reporting information related to deterioration of an image processing apparatus which electrophotographically forms an toner image to a maintenance apparatus;

receiving instruction data transmitted by the maintenance apparatus in response to the report; and

adding anti-forgery information as an electrophotographic toner image to an image at a predetermined addition level based on the instruction data.

38.-42. (Cancelled)

43. (Currently Amended) A maintenance apparatus comprising:

reception means for receiving date information and addition level information of information to be added to an image by an image forming apparatus which electro photographically forms a toner image;

determining means for determining based on the received information, a date at which notification recommending correction of the addition level is to be sent to the image forming apparatus; and

transmitting means for transmitting the notification to the image processing apparatus on the determined date.

44. (Original) The maintenance apparatus according to claim 43, wherein the information to be added to the image is added by a visually inconspicuous method.

45. (Original) The maintenance apparatus according to claim 43, wherein the addition level varies in correspondence with deterioration of the image processing apparatus.

46. (Original) The maintenance apparatus according to claim 43, wherein a timing of the notification is determined based on a date at which the addition level correction was last conducted and a utilization state of the image processing apparatus.

47. (Original) The maintenance apparatus according to claim 43, wherein the addition level information and date information to be added to the image are stored in association with at least one of a machine number, telephone number, IP address, or MAC address or the image forming apparatus.

48. (Cancelled)

49. (Currently Amended) A maintenance method comprising the steps of:  
receiving date information and addition level information of information to be added to an image by an image forming apparatus which electrophotographically forms a toner image;

determining based on the receiving information, a date at which a report recommending correction of the addition level is to be sent to the image forming apparatus;  
and;

transmitting the report to the image processing apparatus on the determined date.

50. (Currently Amended) An image processing apparatus for adding visually inconspicuous information as an electrophotographic toner image to an image, comprising:

reception means for receiving information from a maintenance apparatus in order to further add, in addition to the information, visually inconspicuous information; and

processing means for adding information to be added to the image using the received information.

51. (Original) The image processing apparatus according to claim 50, wherein the received information includes a program for acquiring information to be added to the image.

52. (Original) The image processing apparatus according to claim 50, further comprising inquiry means for inquiring whether or not the maintenance apparatus has additional information to be added to the image.

53. (Original) The image processing apparatus according to claim 52, wherein the inquiry is made at the time of turning on the power of the image processing apparatus, or at predetermined time, or at a timing at which the image processing apparatus shifts to a power-saving mode.

54. (Original) The image processing apparatus according to claim 50, wherein the information to be added includes date information, information regarding an apparatus used to pick up or input the image, copyright information of the image, or setting information of an apparatus used to pick up/input/form the image.



55. (Currently Amended) A maintenance apparatus comprising:

designation means for newly designating information to be added to an image as visually inconspicuous information at the time of ~~image formation~~

electrophotographically forming a toner image in an image processing apparatus; and

transmission means for transmitting information, in addition to information set in advance in the image processing apparatus as addition information, in order to cause the image processing apparatus to form newly designated information to be added to the image.

56. (Original) The apparatus according to claim 55, wherein the transmitted information includes a program for acquiring the newly designated information to be added to the image.

57. (Original) The apparatus according to claim 55, wherein said transmission means transmits the information to be added in response to an inquiry from the image processing apparatus.

58. (Original) The apparatus according to claim 57, wherein the inquiry is made at the time of turning on the power of the image processing apparatus, or at predetermined time, or at a timing at which the image processing apparatus shifts to a power-saving mode.

59. (Original) The apparatus according to claim 55, wherein the newly designated information to be added includes date information, information regarding an apparatus used to pick up or input the image, copyright information of the image, or setting information of an apparatus used to pick up/input/form the image.

60. (Original) The apparatus according to claim 55, wherein said transmission means transmits the information to a plurality of image processing apparatuses including said image processing apparatus, and said maintenance apparatus further comprises display means for displaying addition information in each of the plurality of image processing apparatuses.

61. (Currently Amended) An image processing method of adding visually inconspicuous information to an image using an electrophotographic toner image formation, comprising the steps of:

receiving information from a maintenance apparatus in order to further add, in addition to the information, visually inconspicuous information; and

adding information to be added to the image using the received information.

62. (Currently Amended) A maintenance method comprising the steps of:  
newly designating information to be added to an image as visually inconspicuous information at the time of ~~image~~ electrophotographic toner image formation in an image processing apparatus; and

transmitting information, in addition to information set in advance in the image processing apparatus as addition information, in order to cause the image processing apparatus to form newly designated information to be added to the image.

63. (Currently Amended) A data processing system comprising:

image processing apparatus which processes an image; and

maintenance apparatus connected to said image processing apparatus through a network, which has first determination unit which determines at least one addition level of anti-forgery information based on processing electrophotographic toner image forming ability of said image processing apparatus,

wherein said image processing apparatus adds anti-forgery information, having the determined addition level, to an image.

64. (Currently Amended) The data processing system according to claim 63,

wherein said maintenance apparatus further comprising:

reception unit which receives at least one test pattern from said image processing apparatus; and

second determination unit which determines said processing electrophotographic toner image forming ability of said image processing apparatus based on said test pattern.

65. (Currently Amended) A data processing system comprising:

image processing apparatus which processes an image; and

maintenance apparatus connected to said image processing apparatus through a network, which has first determination unit which determines at least one addition level of anti-forgery information based on degree of degradation related to electrophotographic toner image forming ability of said image processing apparatus,

wherein said image processing apparatus ads anti-forgery information, having the determined addition level, to an image.

66. (Currently Amended) The data processing system according to claim 65, wherein said maintenance apparatus further comprising:

reception unit which receives at least one test pattern from said image processing apparatus; and

second determination unit which determines said degree of degradation related to said electrophotographic toner image forming ability based on said test pattern.